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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DelDuca et al.

Group Art Unit: 1721

Serial No.: 09/346,752

Examiner: LaToya Cross

Filed: July 2, 1999

Atty. Docket No.: 47097-716USC2  
(PCOS:716-2)

For: OXYGEN SCAVENGER  
ACCELERATOR

DECLARATION UNDER 37 C.F.R. § 1.132

Box PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, DC 20231

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Dear Sir:

I, SUSAN P. EVANS, hereby declare that:

1. I work closely with the inventors of the subject application and have been personally involved in the development of the claimed oxygen packets and the claimed methods of increasing the oxygen uptake of an oxygen absorber.

2. I hold a Bachelor of Science in Chemical Engineering degree from Bucknell University awarded in 1970. I have been employed by Pactiv Corporation (and its predecessors) since 1970 and presently hold the title of Development Engineering Supervisor.

3. Based on my experience and education, I have a thorough understanding of the level of ordinary skill in the art of oxygen scavenging packets for use in modified atmosphere packaging systems.

4. I am familiar with the Office Action dated May 23, 2000, and wish to present data that demonstrates that using the methods and proportions of Aswell (U.S. Patent No. 4,588,561), it was not possible to obtain the amount of oxygen claimed in the present invention (less than 0.5 vol. % oxygen at about 34 °F in no more than 90 minutes).

5. Under my direction, several quart jars were tested at room temperature with an ambient atmosphere of 20.9 vol. % oxygen. One MRM-200 (weighing approximately 10g) sachet was activated with liquid (5% Acetic Acid (100% vinegar) or Water) and placed in the quart jar. The lid was tightly closed and allowed to sit for 60 minutes. The lid of the quart jar had a 1/8" hole drilled into it to allow a reading to be taken from the quart jar using an oxygen sensor. A piece of septum was placed over the hole to ensure that there was no gas exchange between the jar and the outside environment. At the end of the sixty minutes, a reading of percent oxygen and percent carbon dioxide was taken from the jar and recorded. This procedure was repeated for three runs for each of the following activators: 1.0 ml of 5 % Acetic Acid (100% vinegar) and 1.2, 6.5 and 12 ml of water.

6. The results of placing the scavenger within the jar were as follows:

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
1	5 % Acetic	5.5	18.8	60 min.

	Acid			
2	5 % Acetic Acid	4.72	19.1	60 min.
3	5 % Acetic Acid	5.38	18.1	60 min.
Average	-	5.20	18.67	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
4	1.2 ml water	6.38	16.5	60 min.
5	1.2 ml water	8.44	19.3	60 min.
6	1.2 ml water	8.40	16.7	60 min.
Average	-	7.74	17.50	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
7	6.5 ml water	15.8	17.5	60 min.
8	6.5 ml water	16.4	16.8	60 min.
9	6.5 ml water	15.7	18.4	60 min.
Average	-	15.97	17.57	60 min.

Test	Activator	One hour percent oxygen	One hour percent Carbon dioxide	Time of Test
10	12 ml water	17	13.5	60 min.
11	12 ml water	16.2	18.5	60 min.
12	12 ml water	16.3	14.7	60 min.
Average	-	16.50	15.57	60 min.

7. The results shown in Paragraph 6 indicate that the amount of liquid significantly affects the amount of oxygen within the jar. Specifically, as the amount of water increases to the level of that used in Aswell (Aswell contains 60-80% water relative to the weight of the oxygen reactive material, the experiments using 6.5 and 12 ml

water in this experiment used at least the level found in Aswell), the reaction becomes impractical to continue because a very small amount of oxygen is actually being removed from the system. Basic scientific laws indicate that this reaction would be even slower (*i.e.*, less oxygen would be absorbed) at lower temperatures. Thus, I conclude that using the temperature and the amount of water, in accordance with the levels in Aswell, would not permit one to predict the temperature and the amount of water required to reduce the amount of oxygen to less than 0.5 vol. %, as disclosed and claimed in the present application.

8. I also have knowledge of testing performed by Gary Delduca (one of the inventors of the present invention) of MRM-200 packets and TRM-5.5 sachets. The MRM packets use 1 ml of vinegar while the TRM sachet uses 1.3-1.4 ml of water. At 72 degrees Fahrenheit in a quart jar, the MRM packet reaches 4 vol. % oxygen while the TRM only is able to reach 11 vol. % oxygen. Similarly, the MRM reaches 9.6 vol. % oxygen and the TRM is only able to achieve approximately 15.2 vol. % oxygen at 34 degrees Fahrenheit.

9. The results of paragraph 8 indicate that the rate of absorption of oxygen between 21 vol. % and 2 vol. % at room conditions does not correspond with the rate of oxygen absorption between 2 vol. % and 0 vol. % at low temperatures.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment or both under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced or any patent issuing thereon.

August 24<sup>th</sup>, 2000  
DATE

Susan P. Evans  
SUSAN P. EVANS